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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,425	01/06/2004	Martin Eberle	38190/260888	3796

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EXAMINER	
RADI, JOHN A	
ART UNIT	**PAPER NUMBER**
3641	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/752,425	EBERLE ET AL.	
	Examiner	Art Unit	
	John A. Radi	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 8/3/04.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-14 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/6/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-14, drawn to method for launching an LTA, classified in class 244, subclass 97.

II. Claims 15-23, drawn to method for launching an LTA, classified in class 244, subclass 96.

III. Claims 24-27, drawn to an apparatus for launching an LTA, classified in class 244, subclass 98.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility because it can be used to release an aircraft in a substantially horizontal position less than 45 degrees from the horizon as required by invention II. See MPEP § 806.05(d).

Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, invention I doesn't require the use of the two mast apparatus as taught by invention III. Instead, the aircraft of invention I can be filled and held in

place by alternative means, or by masts not rotatably connected while being filled and launched.

Inventions II and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case invention III can be used to release an aircraft in a substantially horizontal position less than 45 degrees from the horizon as required by invention II.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Groups II or III, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

During a telephone conversation with Nicholas F. Galo on September 14th, a provisional election was made wtih traverse to prosecute invention I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 8 rejected under 35 U.S.C. 112, second paragraph, because the specification, while enabling for use of an internal gas bag or ballonet, such a claim is inconsistent in scope from the independent claim from which it depends. Claim 1 is drawn to a method for launching in which the lift gas and second gas are introduced together in the same envelope, separated only by a small region of mixed gas. In contrast, claim 8 introduces a gas bag for receiving the lift gas, which entirely eliminates a mixed gas region.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1-5 rejected under 35 U.S.C. 102(a) as being anticipated by Dunlap (US4215834).

Dunlap discloses a method for launching an aircraft having an envelope for receiving a lift gas that is lighter than air (Helium and Methanol – fig. 1), proving the aircraft with a second gas in the envelope (Ammonia/Air mixture – fig. 1), the second gas being heavier than the lift gas, the lift gas and second gas being substantially separate (fig. 1, and col. 2, line 24).

With respect to claim 2, wherein said providing step comprises air as the second gas, see figure 1 in which the envelope (12) is open to the atmosphere, and the envelope is filled with one of the lift gases, ammonia.

With respect to claim 3, wherein introducing step comprises introducing helium as a lift gas, see figure 1 in which the primary lift gas consists of a mixture of Helium and Methanol.

With respect to claim 4 and 5, wherein the center of buoyancy is between the center of gravity of aircraft and first longitudinal end of aircraft, such that first end is oriented above a second distal end, and releasing aircraft such that the longitudinal axis is greater than 45 degrees from the horizontal: see figure 1 in which the first longitudinal end of aircraft is the top of the aircraft which is situated above second distal end, which contains the mass/payload of said aircraft, and is launched at 90 degrees to the horizontal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehmann (US 2024587) further in view of Dunlap as applied to claims 1-5 above.

Lehmann discloses an aircraft having an envelope for receiving a lift gas (L), securing the aircraft to a combination of masts (S1, S2), raising an end of the aircraft higher than the second distal end such that the longitudinal of the aircraft is at an angle to the horizontal (fig. 1). Further, Lehmann provides for securing the aircraft to a first and second mast such that the longitudinal axis of the aircraft is substantially horizontal (col. 3, line 22).

Lehmann does not disclose providing a second gas in the envelope, second gas being heavier than the lift gas and substantially separated from the lift gas by a mixed

gas region. Lehmann also doesn't disclose launching the aircraft by first releasing one end of the aircraft followed by the other, or a method by which the lift gas is introduced by means of a tubular channel.

Dunlap discloses the mixed gas envelope for use in airships to account for changes in gas density from night to day (abstract).

With respect to claim 7 and 10, Lehman discloses that it is well known in the art to provide a starting motion to the aircraft by providing an upward velocity to the lowest forward portion of the airship (second paragraph). The examiner takes official notice that it would be obvious to one skilled in the art that the initial upward motion provided by a crew pushing up, or by the starting device taught by Lehmann is the equivalent of launching an airship with a buoyant balloon attached to one end of an airship, or by releasing one end of an airship ahead of the other to provide an angled launch.

The motivation for combining the combination lift gas as taught by Dunlap with Lehmann is to solve the same problem as that of the applicant, to compensate for changes in lift gas density as the balloon reaches a higher altitude and to account for the changes in the envelope volume from day to night (col. 2, line 38). Therefore it would have been obvious to one skilled in the art at the time of invention to combine the mixed gas envelope airship of Dunlap with the airship launching method as taught by Lehmann.

Claim 11 is rejected 35 U.S.C. 103(a) as being unpatentable over Lehmann (US 2024587) in view of Dunlap as applied to claims 1 and 6 above, and further in view of Krell (US 1734812).

Lehmann in view of Dunlap discloses a aircraft with a mixed gas envelope for receiving a lift gas (L), securing the aircraft to a combination of masts (S1, S2), raising an end of the aircraft higher than the second distal end such that the longitudinal of the aircraft is at an angle to the horizontal (fig. 1). Further, Lehmann provides for securing the aircraft to a first and second mast such that the longitudinal axis of the aircraft is substantially horizontal (col. 3, line 22).

The Lehmann and Dunlap combination doesn't disclose a rollably movable mast. Krell teaches an apparatus for landing airships that is rollably moveable. Krell provides the motivation for combining with the Lehmann/Dunlap combination, which is to provide a moveable mooring mast which can direct the balloon into a safe hangar even during unfavorable weather conditions such as high wind. Therefore it would have been obvious to one skilled in the art at the time of invention to combine the movable mast of Krell with the airship combination of Lehmann/Dunlap.

Claim 12 is rejected 35 U.S.C. 103(a) as being unpatentable over Dunlap as applied to claim 1 above, further in view of Chenu (US 1549061).

Dunlap discloses a method for launching an aircraft having an envelope for receiving a lift gas that is lighter than air (Helium and Methanol – fig. 1), proving the aircraft with a second gas in the envelope (Ammonia/Air mixture – fig. 1), the second

gas being heavier than the lift gas, the lift gas and second gas being substantially separate (fig. 1, and col. 2, line 24).

Dunlap doesn't explicitly disclose the method by which gas is introduced into the envelope. Chenu teaches that gas can be inserted into the envelope of an airship by means of an injection tube inserted towards the top end of the envelope.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunlap, further in view of Yokomaku et al. (US 6427943).

Dunlap discloses a method for launching an aircraft having an envelope for receiving a lift gas that is lighter than air (Helium and Methanol – fig. 1), proving the aircraft with a second gas in the envelope (Ammonia/Air mixture – fig. 1), the second gas being heavier than the lift gas, the lift gas and second gas being substantially separate (fig. 1, and col. 2, line 24).

While Dunlap doesn't explicitly disclose the method of descending by venting lift gas and introducing air to lower the airship's buoyancy is a well known method of airship handling techniques. In the "Background of the Invention," Yokomaku discloses typical airship handling techniques which include venting lift gas to cause descent, and pumping air into the envelope so the hull maintains its shape, and repeating these steps to relaunch the vehicle (see Background of Invention, Columns 1 and 2, paragraphs 2, 8, and 12). Therefore it would have been obvious to one skilled in the art at the time of invention to handle an airship as taught by Dunlap with the techniques described by Yokomaku.

Conclusion

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Radi whose telephone number is 571-272-5883. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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